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Society for the Encouragement of Arts, Manufactures, and Commerce.

PROGRAMME OF INSTRUCTIONS

FOR

DELEGATES TO THE MEETINGS

TO BE HELD FOR THE CONSIDERATION OF

AN IMPROVED NATIONAL SYSTEM OF EDUCATION.

1. The investigations carried on in the Society have established the conclusion that, for the attainment of its general objects—the advancement of Arts, Manufactures, and Commerce—a general system of improved technical education is necessary. It is, however, agreed on all hands that, for an improved and extended system of technical education, to enable this country to maintain its position as regards the industrial arts, an improved general system of primary education is an absolutely indispensable condition. But the present system of primary education, with some exceptions of large schools in the chief cities, is one which, for the great bulk of the middle classes, as well as for the children of the artisan class, positively excludes technical instruction, and excludes any express preparation for technical instruction in the usual school stages. By the existing common methods of teaching, consequent on the common school organisation, children entering the school by their seventh year are not taught, even by trained teachers, to read intelligently, to write a fair hand, or to acquire the elements of arithmetic, in less than six or seven years—that is, before their thirteenth or fourteenth year. Parents of the wage-classes, however, will have their children away from school, for some remunerative service, before their eleventh year, and even much earlier in the agricultural districts. It is the general complaint of school-teachers that the children are now taken away from school half-taught. Parents of the great majority of the middle-classes also must have their children away by their thirteenth or fourteenth year;—that is to say, by the time they have received the most simple elementary instruction, and before they can have acquired any important amount of technical instruction.

2. Under these common conditions, therefore, technical instruction is only acquired—and can now only be acquired—by a few in evening schools, or by the children of the more wealthy. Only some hundred thousand youths, taught in evening schools, or under exceptional conditions, are in communication with the Science and Art Department; —whereas, under the educational conditions required for the technical and art progress of the empire, at least a million of children ought to be under special training for the augmentation of their productive power and service. It has been established by various and long-tried examples of improved educational organisation examined by members of the Council, and by the information of teachers of the highest practical experience (*vide* Appendix) that the elementary teaching may be greatly improved, and the time of teaching, in hours daily and in years, may be reduced by fully one-half—in years to three, instead of six or seven (*vide* information from Mr. Morrison, the Rector of the Glasgow Free Church Training College; Mr. Imeson, of the Central District School of London; Mr. Longford, and others); and, in hours of daily desk-work in school, to three instead of five.

3. By such improved educational organisations, and by improved means of educational art-teaching, the children of the wage-classes may in general be prepared and sent away, if needed, before their eleventh year, adequately versed in the elements of instruction—enabled to read intelligently, to write clearly, to cipher up to decimal fractions, with some initiation of the hand and eye in elementary drawing, with improved physical as well as mental aptitudes for all sciences, by complete drill, music, and manual and gymnastic exercises.

4. With such aptitudes, the children of the

wage classes will be widely and better prepared—as they are found to be in Holland—for art, and science, and technical instruction, which are there in prosperous progress beyond this country. (*Vide* information obtained from Dr. Lindo, Government Inspector of Primary Schools, and of Dr. Bosscha, Government Inspector of Secondary Schools in Holland.) But by the gain of two years or more—by these improved organisations and methods of elementary teaching in the primary stages—the means of direct art and technical instruction may be provided for *all* the children of persons of themiddle classes, as well as for children of the more advanced of the artisan classes.

5. It appears that, by these long-tried improved educational organisations, the required improvements in the quality of trained teaching power may be generally attained, not only without any increase, but even with a reduction of the total common annual expenses, and that given amounts of elementary attainments may be imparted, of a superior quality, to three at an expense now commonly incurred for one. (*Vide* illustrative table by Mr. Allen, and information by Mr. Imeson, of the Central District School of London). It follows, however, that whilst exertions should be made to extend the existing means of art, and science, and technical instruction by institutions, by evening schools, and by colleges, for all who may now be ready for them,—the great legislative and administrative policy of the country is to concentrate attention on the improvement and the extension of an improved elementary education—to the shortening of the years as well as hours of the day for the elementary training of the population of this country. To this end, exertion is required to be directed to the improvement and the general extension of infant-school teaching, by which it is now proved that an advanced preparation may be made, and from one year and a-half to two years of valuable elementary school-time may be saved.

6. Having regard to the hard necessities of common life, and the economical condition and welfare of the many, one great object for saving school-time is, as early as practicable, to let earning and learning go on, as much as possible, together. The great practical object of school teaching is not to make superior scholars, but superior artisans;—not to impart to the middle classes the accomplishments of the leisure classes, but applied science and productive art for actual service. It is desirable, for the progress of Arts, Manufactures, and Commerce, to make the school itself primarily a manufactory, and a labour mart for available service. (*Vide* testimony of Mr. Longford, of the Forest-gate District School.)

7. The half school-time principle, and all reductions of school-time, is conducive to this end. It is now proved that the capacity of the beneficial attention and mental labour of children is exhausted in the good primary schools in less than three hours of good sustained teaching, and that all labour beyond that is detrimental or pernicious. The combination of book instruction with physical exercise, or with actual productive avocations, is proved to be advantageous to both, and this is true of middle-class or superior as well as inferior teaching.

8. Professor Bain, of Aberdeen, the eminent psychologist, states that he has in his classes in the university there, the hardest heads and the hardest workers in the United Kingdom, and that four hours of daily mental labour is as much as is good for them. In the Owens College, Manchester, the majority of the students attend only the night classes, being engaged in various occupations during the day; and, of the day-students, a considerable number are engaged in manufactories, or in professional pursuits, to which the science-teaching of the classes they attend are conducive. Numbers of the students so engaged in studios, manufactories, or counting-houses during the day, have, by ten hours of weekly attendance at the college classes, aided by home preparations, been enabled to pass the strict examinations for degrees at the London University. At that advanced college the need of improvement in primary elementary teaching for the middle-classes is strongly felt. From the information given by Dr. Bosscha, the Inspector of Secondary Schools in Holland, it will be seen how much of science and art teaching is there imparted on what may be termed the half-time system, or three hours of daily teaching in the secondary schools.

9. In respect to primary instruction, it appears that much time may be saved, and that the efficiency of the three hours' available desk-work may be doubled by improvements in the teaching art.

10. As to the art of reading—methods are in use by which it is declared that reading and writing are better taught together, in less than half the time now occupied in common school practice.

11. The Council has had brought under its consideration the means of improving the common spelling. The difficulty of teaching spelling to children, and the cruel perplexity inflicted upon them in learning it, is well known to teachers. There can be no doubt that reform of our common corrupted spelling would be not only a great shortening of school-time, and a relief to the torment of children in learning, but likewise a relief and a removal of grievous obstructions to foreigners in learning our language.

12. As to the art of teaching handwriting, a new method has been recently introduced into Germany, by which it is asserted that children are taught in half the time now occupied by the common methods.

13. As to the art of teaching arithmetic, new methods are in use, by cards with varied sums already set, for individual work in classes, by which the time of the teacher as well as the time of the learner is considerably saved. But it is stated by first-class school-teachers that, by the general adoption of the decimal system, fully one-half the time of teaching children arithmetic may be saved, their torment in learning conflicting tables relieved, and their habits of thought improved in this primary branch of elementary instruction, which has been properly termed "the geometry of the poor." For the improvement of the primary instruction of the population under a national system of education, and for art and technical education especially, the general adoption of the decimal and metrical system will be found to be deserving of a national effort.

14. Time saved in learning is, to the mass of the population, time gained for earning. Time saved in improved primary learning is also time gained for improved art and technical learning, and for the augmentation of efficiency in the great national earning.

15. It is considered, therefore, that improvements in the teaching art for elementary instruction should be sedulously cultivated separately. Various methods are stated to have been in long and successful practice. It is proposed that the Council shall institute examinations, and give prize medals for the best of these methods that have been, or may be, proved by actual trial.

16. To the improvements practicable in the mental training by book instruction, there is to be added the improvement of the means of physical as well as of mental training; in the infant school, by the exercise of the fingers; in the primary schools, training the hand and eye by teaching elementary drawing; and on the playground, by improved gymnastic and bodily exercises.

17. It is declared that, by improved gymnastic exercises, superadded to the common military drill, the efficiency of five is given to three for all purposes of ordinary labour. The military drill is an exercise of mental habits, of visible and undoubted habits of attention, and of all that is implied in the word discipline—self-restraint, patience, silence when under orders, prompt and exact obedince, and highest respect for gradations of authority. For industrial occupations it prepares them for combined action—to move together, to lift together—by which the increase of efficiency for civil work is imparted.

18. It will be conducive to the proper discussion of the question of national education, now about to be raised in various directions, to endeavour to get clear ideas of what is required to be done, and clear undoubted proof of what is actually done, as a basis for the consideration of the application of administrative and legislative art and science for doing it.

19. For the saving of the time of teaching, and also for the improvement of the quality of teaching, without any considerable augmentation of expense, the great means will be the application of the improvement of the teaching art, by the division of educational labour and simultaneous class-teaching, by trained teachers of the different gradations of age, and competing by different classes in the same school, or by gradations of classes in different buildings. (*Vide* the example of the Faversham School Union, and the accounts of the school union at Merthyr Tydvil, and of the great Jews' Free School in London.) For these purposes, it is necessary that aggregations of children should be made, for their segregation into the best appropriate classes. It is desirable that these means should be early considered practically. It is, therefore, proposed that medals should be given to school-teachers, for the best six schemes for actual purely urban districts, and for the best six schemes for the classification and teaching of the children of six small town districts, of not more than six thousand each, comprising adjacent rural population, showing the extent to which the education and training may be advanced; 1st, before the eleventh year, for the children of the wage-classes; and 2nd, from the eleventh to the fourteenth year, for the children of the middle classes; and the amount and description of art and technical education that may be imparted to them, without greatly-increased expense, within that time, by an application of the principles specified, by better classification, and by a division of skilled teaching and training power. In addition to these schemes it would be of use to send one or two teachers acquainted with improved school organisation to examine and report how much of time may be gained by it for art and technical education, and of what class, within the day school time, in one or two places to which they may be directed as specimen places. It is suggested that gentlemen locally interested in the improvement of the population should promote such investigations for themselves, and that local committees of educationists may well be formed for the purpose.

20. Such schemes which may comprehend the improved application of existing educational and charitable endowments, may well be published locally, for local examination and discussion.

21. In respect to the question of compulsory education, it may be observed that the shortening of school-time practicable for teaching reading, writing, and arithmetic from six years to three, will render unnecessary a great part, if not the whole, of the compulsory action now sought for to retain the children of the wage-classes in the school to their thirteenth

year, and that, of the children of the wage-classes who do not now attend school, their voluntary attendance will be greatly conciliated by the reduction of the daily hours of teaching on the half-time principle from six hours daily attendance to three, and which, to a great extent, enables domestic service and earning and learning to go on together. Such compulsion as may be necessary, in relation to the children of the wage-classes, may be best applied by an extension of the principle of the Factory Acts. The needed exercise of a serious amount of compulsion will then be restricted to destitute orphans now chargeable on the poor-rates, and, as a measure of police, to the varying numbers of the vagrant and criminal classes. The example of the mixed physical, industrial, and mental training of the district schools visited by the Council is decisive as to the efficiency and economy of an application of an improved teaching and training power, for the extirpation of juvenile mendicity and of juvenile delinquency, the great seed-plot of the criminal population which fills the gaols of the country.

22. In relation to this class especially, experience confirms the great old Hebrew aphorism, "that he who fails to teach his child a trade, teaches him to become a thief." In one mode of teaching—the common mode—with common teaching power, but without industrial training, the great mass went to the bad, and became paupers, mendicants, or delinquents. By another mode, with physical and industrial training, the failures have been under three per cent. Good expenditure, under this experience, may be set down as a means of economising two millions annually of expenditure for penal administration and ineffective repression. Finally, it is to be observed that the question of compulsory school-teaching must be assumed to have relation to *good* school-teaching. Of the present school-teaching in England, it has been stated by a distinguished Government inspector, the Reverend Mr. Fraser, that about one-third of it is tolerably good—that is to say, in the common accepted term of the goodness of the schools which impart the "three R's" in about six years instead of three, and that are destitute of physical training—that about one-third of it is indifferent, and another third of it utterly valueless. Moreover, it has been a subject of complaint by the Government Inspectors in their reports that the condition of many of the schools into which children are now crowded is most grievously injurious to their health, as well as to the health of the teachers. The medical officers of health of the metropolis have represented that a great portion of the schools which come within their cognizance, and which are by no means the worst—are sources for the generation and spread of epidemic disease, and that an excess of nine thousand deaths annually in their districts, was largely attributable to them. In respect to the teaching power supplied from the training colleges, inasmuch as the only material on which those colleges can depend is the pupil-teachers, whose numbers are now much below what is necessary to supply the wants of the colleges, and, what is worse still, their quality is pronounced to be very inferior to what it was five years ago—the quality of the teaching which required elevation is being lowered. Now, it would be a false movement which should effect a compulsory school attendance indiscriminately on such inferior conditions, and which did not provide for something other and better. "As is the teacher so is the school," is a condition now of general experience; and the first condition of a national education is to obtain, through training colleges, efficient school teachers. The training colleges, in their present condition, are pronounced by the highest authority to be quite incapable of supplying the wants of the country.

23. In respect to instruction in religion, the only desire must be that it may be improved beyond that now given, as described by the clerical inspectors in the last report of the Committee of Privy Council on Education (which *vide*). Merely for industrial purposes, what is needed is the substitution of habitual liars, cheats, and drunkards, requiring perpetual, painful, and expensive supervision, by a commandment-keeping, truthful, sober, law-abiding, contract-performing, conscientious, trustworthy class, thoroughly imbued with practical Christianity, for which the clergymen of all denominations ought to be made really responsible. The Faversham School Union, approved by the late Archbishop of Canterbury (Sumner) and the Protestant Dissenters living there, is an admitted example of how the anticipations of the late Dr. Chalmers may be realised, and religious differences set aside, and education be placed on the basis of a common Christianity. Since 1857 this system has been in vogue in Holland, and the Council is assured that it works excellently.

24. These facts and outline conclusions, which have regard to the advancement of the art and technical education, as well as the simple primary education of the wage-classes, are not put forth dogmatically, but are submitted with a view to the independent examination and consideration of the facts and reasons indicated, on which they are founded. It is hoped that they may be examined and discussed by the Institutions in Union, and by those who take part in the meetings to be held on the deeply important questions raised.

(By order of the Council) P. LE NEVE FOSTER,
Secretary.

APPENDIX.

LARGE SCHOOLS.

The gain of educational power, in quality and in time of instruction, is exemplified in two large schools, both giving elementary instruction in two languages—the Dowlais School, where the children of the Welsh mining population, upwards of two thousand, under one direction, speaking Welsh, are taught in English; the other, the great Jews' Free School of Spitalfields, where upwards of fifteen hundred boys, and more than a thousand girls, are taught Hebrew at the same time that they receive elementary instruction in English. This aggregation may, however, be presented as displaying the administrative arrangements practicable for a town of twenty thousand of population. By this administration is gained combination for the teaching each child, in the place of a single master or a single mistress, a subdivision of labour amongst thirty teachers and pupil-teachers, including amongst the teachers three B.A.'s of the University of London, and having for their general direction a man of distinguished general ability and high intellectual rank. The annual cost per head of a single trained teacher of a small school of fifty pupils, it is to be borne in mind, is not less, on the average, than £2 per annum, and the time of teaching six or seven years, at a total cost of from £12 to £14; whilst the annual cost of the larger teaching power is £1 12s. 3d. per head (including the extra expense of professors of Hebrew); the time of teaching the equivalent elementary knowledge, with Hebrew in addition, about four years; and the total expense, about £6 9s. But the effect of the teaching-power, in quality and amount, can only be estimated by an examination of the very inferior material operated upon, the greater proportion of the children being of the poorest and most abject in the metropolis; and by examining the low intellectual condition in which they come in, and contrasting it with the condition to which they are brought before they leave. A very large proportion of foreign-born children is admitted to the school every year. Mr. Angel, the head-master, states that the "proportion is about seven foreigners to ten natives. Between 600 and 700 boys are admitted every year, and of these at least 90 per cent. do not know either the English or the Hebrew alphabet. Foreign boys also have to unlearn their native jargon as well as to acquire our vernacular; and some idea may be formed of this hindrance to improvement, when I state that I admit many boys who can give themselves no intelligible English name; who frequently fail to answer to the nearest approximate name into which I can translate the home appellation, and who not seldom come into school with one name, and leave school with another name. The same details apply to girls." As to their social position, he states that "the parents of every child may be said to belong to the labouring classes. Many are so poor that they are thankful for a loaf of bread given in charity. Of my 1,520 boys, not more than 1,000 can afford to pay the small weekly penny charged for school fees; the remainder are excused. All are glad to accept a suit of clothes and a pair of boots annually given by the Rothschild family."

In answer to the question as to the attainments imparted in the schools to the pupils of different ages, Mr. Angel states:—"By the age of seven, few children are advanced beyond the first standard, especially so as to enable a child to be moved from the lower classes. Progress in Hebrew and English must be analagous. Some children have a speciality for Hebrew, some for English, and this demands care on the part of the teachers, to ensure uniformity of improvement. By the eleventh year, children have attained the fourth and fifth, and in a few exceptional cases, the sixth standard. Contemporaneously they have acquired fluency in Hebrew reading, and facility for translating easy passages from Hebrew into English; they have, moreover, committed to memory several long Hebrew prayers and formulæ.

"By the 14th year, children have passed the sixth standard, and have attained a fair knowledge of grammar, geography, history, social and general science, physiology, Euclid (1st Book), Algebra (to simple equations). They are all able, moreover, to translate the entire Scriptures from Hebrew to English and *vice versa*; they know Hebrew grammar, and have some acquaintance with Rabbinical literature. But these are exceptional cases, as few boys stop beyond thirteen years of age. As a sample of what is done in the school, a set of five examination papers is sent herewith. These papers are set by the several examiners, without any communication with the teachers, and the boys examined are called on to answer in writing, on the same terms that are employed at a university examination. Such an examination is carried on (under different examiners every year, the programme varying according to the curriculum of study laid down by the managers."

What do you consider to be the advantages of your large aggregation of pupils?

"1st. Better classification.—There are as many grades of intellect and intelligence in 50 children as in 1,500 children. Increased numbers of teachers admit of minute subdivision of classes, to meet the diversity of powers in the pupils.

"2nd. Better character of teachers.—Centralisation produces economy in management, and thus sets free funds for the better remuneration of teachers. The hope of rising is the great stimulus to exertion. A system which recognises only small schools is fatal to that honest ambition which prompts men to qualify themselves for high positions while filling low positions. In schools of 50, a teacher attains the top of the tree at the very outset. Compelled to be content with the small salary commensurate with his small field of duty, and to be satisfied with the trifling results possible among numbers so contracted, his desires and his energies vegetate together. Poverty cripples his means, intellectual no less than tangible, and the insignificance to which his narrow sphere of action condemns him has a damaging effect on his character. On the other hand, the fact that capabilities in teaching may attract pupils without limit, just as skill in any industrial or commercial pursuit may secure increased patronage, is a powerful stimulus to excite talent to exertion, and to prompt mediocrity to aspire to excellence. Teachers who know that their position, social as well as scholastic, may be whatever they choose to make it by exertion, have an interest in their work independent of the ordinary interest which conscience alone should engender. Thus, where a system sets no limit to the numbers of a school, it will happen in any neighbourhood that the school conducted by the best teachers will gradually absorb other schools, and will even attract children from distant localities. The teacher will be urged to self-culture, both as a scholar and a teacher, by the success he has achieved, and by the further success he hopes to achieve. His position will be an improving position, and so will prevent his being tempted to seek a better paid appointment; and in this way his experience of the wants of the particular class of pupils with whom he has to deal will be another element towards securing improved results. But even here the benefits to the teacher will not stop. By degrees the original sole teacher will become the director, and other teachers, graduated according to what may be required of them, will conduct classes under him. The promotion possible will urge these to deserve it, and thus not only will every teacher be actuated by the desire to improve, but all the higher classes will be taught by adults, and pupil-teachers will be entrusted with only the lower classes. The above is an hypothesis. Thirty years ago, when I became master of the Jews' Free School, it contained 216 boys; I was the only master, and my teaching-staff was composed of the monitors I could train. Now, my school contains above 1,500 boys. All the other schools about have been long closed, and my teaching-staff, besides pupil-teachers, consists of four certificated teachers and ten adult assistant teachers, included on the list being three B.A.'s,* and several undergraduates of the University of London, not one of whom is not, in some way, a constant student. Of course, simultaneously, the social progress has advanced in a like way, the salaries paid to assistants varying thus:—£180, £150, £120, £100, £80, £60, £50, &c.

"3rd. Higher character of instruction, and better training, mentally, morally, and intellectually, follow from the higher character of teachers. I have met several teachers of small schools, many holding certificates, and my experience is, that the great majority know little more than the mere routine necessary for their position. Well-up in all the mechanism and book-theories of school management, they have been mostly ignorant of literature, deficient in general information, and as narrow in mind as they have been contracted in circumstances. Originally rising from the ranks of the school, what have been their opportunities? As children, they had a home little calculated to enlarge and elevate the teaching of school; as youths, they had to struggle to maintain the equilibrium between the tutorial dignity of apprentices and the social humility of birth, without any superior intellectuality to preserve the balance; as young men, they were subjected to the semi-monastic seclusion of the normal college, which troubles itself with little but the course necessary for the certificate examination, and not at all with the formation of those business-like and worldly habits which should be an integral portion of the character which has to mould children to be useful and reputable members of society. In my school, the teachers have the same origin as other teachers, but I believe that there the parallel ends. Many of my pupil-teachers have matriculated and passed the first B.A. examination before completing their apprenticeship, and more than one has held the degree of B.A. before he has been old enough to sit for his certificate. For general scholarly attainments, high and refined perceptions of morality, an elevated idea of duty, and a corresponding zeal in its discharge, I think my teachers may challenge comparison. And I attribute this result entirely to the system which has placed within their reach the best and most enlarged training concomitantly with such means as enables the gentleman in mind to be a gentleman in position—humble, it may be, but still free from the galling restraints of absolute poverty, and with the prospect of promotion to cheer the present and to benefit the future."

The Dowlais schools, which are under one direction, and practically form one school, have 2,653 scholars on the books, and an average attendance of 1,950; and had 2,015 for presentation to the inspector at the last inspection. They are almost exclusively children of the wage-classes. The teaching power consists of six principal teachers, seven assistant-teachers, 27 pupil teachers, and 20 probationers for pupil teacherships. The cost per head of the scholars on the books for teaching power is 15s. 3d., or per head of average attendance is £1 0s. 9d. Mr. Hurst, the head master, in answer to the questions as to the attainments imparted by this teaching power, at different ages, states:—

The point of attainment reached in the infant school may be fairly represented by standard 1 of the Revised Code; but this, in a school in Wales, indicates a greater amount of work than would be required to attain the same point in an English infant school; inasmuch as at least 90 per cent. of the children speak Welsh only when first admitted, and of course a knowledge of English must be imparted before much progress can be made in other subjects.

Presuming that a boy is fairly regular in his attendance, from the time he is transferred from the infant to the boys' department till he is ten and a-half years old, he would have acquired a knowledge of vulgar fractions, pass with ease the fourth standard of the Privy Council, have become familiar with the definitions of grammatical and geographical terms, be able to parse a simple sentence, and have a fair acquaintance with the geography of the British Isles. This is the point of my own third class of 55 boys, with an average age of ten years and two months.

Boys remaining at school to the age of fourteen and a-half years would have acquired considerable fluency in reading, great correctness in writing from dictation, and a thorough knowledge of every useful rule in arithmetic, mensuration of superficies and solids. He would also possess a very fair practical acquaintance with the geography of the whole world, the history of England, and the analysis of sentences.

The girls are taught sewing one and a quarter hour per day, but deducting the time devoted to this, the progress of the girls is much on a par with that of the boys. As a rule, I think the girls are somewhat sharper in reading than the boys, and the boys quicker than the girls at figures.

Having the honour to hold a commission as ensign in one of the companies of Colonel Clark's battalion, I take pleasure in instructing the elder boys in the volunteer military drill, having been provided with 100 rifles of suitable size for that purpose. A gymnasium and circular swings are erected in the large play-ground adjoining the schools, of which the children are not slow to avail themselves. Though teaching swimming forms no part of the school routine, there are ample facilities in the neighbourhood for acquiring the art, and these are readily embraced by the boys in the summer time.

My experience is, that the better the education the better the workman. Those boys who remain in school to 13 or 14 years of age, and have had the advantage of being for some time in the first class, are invariably drafted to the superior kinds of employment in the works; while, on the other hand, a boy leaving, say from the lowest class in the school, naturally graduates to that inferior kind of labour for which his degree of intelligence alone fits him. It would not be difficult to tell, from the occupation of a boy in the works, the position he held in the school. I may state, by way of example, that the post of chief coal agent, that of manager of the mills and forges, of the principal check clerk, of the heads of various departments, with their numerous subordinates, are filled by persons who have received their education in the Dowlais schools. Similar situations in neighbouring works have also been filled by men formerly trained in these schools. I may also mention that a collier's son, solely educated here, and recommended by me as errand boy and junior clerk in a lawyer's office in Merthyr, is now practising himself in the town of Aberdare. I know of no single instance of a person, native or imported, of neglected or inferior education rising to any position of importance in the works.

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* One is about trying for the degree of M.A.

PRACTICAL EXPERIENCE OF THE RESULTS OF TEACHING IN SMALL AND LARGE SCHOOLS ON THE HALF-TIME SYSTEM, AND OF THE GAIN OF TIME OBTAINABLE FOR TECHNICAL EDUCATION.

Mr. Thomas Langford, first-class certificated Master of the Forest-gate District School (half-time school of pauper children.)

At what other schools than this, and with what numbers have you taught?—I taught for about four and a-half years in the school of the West Malling Union, where there was an average of forty-five children. Then I taught at the Fulham Union School, where there was an average of about fifty children. I have taught for four years here, where there is an average of 315.

Now, in your experience of teaching in the schools with fifty pupils and under, in what time could you there teach the children to write a clear hand, to read intelligently, enable them to pass creditably the ordinary examinations in arithmetic approved by the Privy Council, to master thoroughly the four rules, including proportion, as far as decimal fractions inclusive?—In the small schools it took nearly seven years to attain that standard, for in a school of forty or fifty pupils they have to be sub-divided into four or five classes, and require more individual teaching than in a large school; for, as the pupils forming the classes are necessarily few in number, that spirit of emulation is almost wholly wanting that marks the progress of a large school, and the energy of the master himself is oft-times sorely taxed when he places on the one side his few in number, and on the other his scanty harvest of results; and in a large school, too, it requires more that supervision should be exercised that all classes are working, rather than the irksome task of individual teaching.

In this school with the 315 pupils, in what time do you impart the same amount of instruction?—In a little more than three years and a-half.

Now, in the small union schools what must have been the total cost of teaching power to impart the amount of instruction stated?—It was about £1 13s. per head per annum.

What is it here?—About £1 5s. per head per annum. But this includes military music and drill.

This school is on the half-time system?—Yes.

What amount of instruction do you impart to this class of children, about the tenth year and a-half, or less, in the three years, by teaching with a staff of teachers and a division of educational labour such as you have here?—To read intelligently the standard reading books generally used under the Revised Code, or any other secular reading book suited to their capacity, with the meanings of the more difficult words; to master the four compound rules, and to answer with tolerable accuracy questions in mental arithmetic; to know the general geography of England; to write legibly and correctly simple sentences from dictation; and to answer such questions in Scripture history as is generally expected from a child of that age. The arithmetic would include simple proportion; geography more fully; to write a neat small hand, either in copybooks or a slate dictation. In a small school such a standard is seldom obtained. One cause of this failure may be attributed to the absence of an infant school.

What amount of instruction do you impart here by about the thirteenth year?—To read intelligently from a secular reading book, and to be able to supply the meanings of the words; to master proportion and practice, including fractions, and to solve questions in mental arithmetic with rapidity; to be able to write neatly, and with tolerable accuracy, a subject from dictation; geography of Europe in particular; to have a knowledge of our colonial empire, and to be acquainted with the several parts of the world where we procure the various articles in common use; a knowledge of map-drawing in the first-class.

Do you not find the time of school teaching, on the alternate day system, somewhat in excess of the children's capacity of attention?—Yes.

Have you seen any reason to prefer the practice of teaching three hours daily?—Not by actual experience, as I have been always accustomed to work upon the alternate day system, but my opinion would go in favour of three hours' daily teaching.

Have you observed any and what results on the pupils, of the military drill and physical training in this school, as compared with the results obtained in your two first schools, where there was no such drill or training?—A very marked difference is always to be seen in the schools where the pupils are taught military drill, inasmuch as it accomplishes a two-fold object. In the first place, no one doubts that it is conducive to good health, as every part of the body is called into action by the many and useful evolutions they perform, but it does something more, it acts upon the pupil in a moral sense; it teaches him to be smart in his deportment, lively and quick in his motions, tidy and orderly in his habits, and sharpens the intellect, and oft-times makes him feel what is so often wanted in our pauper schools, "self-respect." The system of military drill in our schools cannot be too widely diffused. The benefit of this, too, is wholly lost in a small school, as the numbers are too small to admit of the expense, and it is the nature of boys, more particularly of the lower order, to lounge and to become careless and idle in their walk and habits.

Have you observed any, and what differences in the rates in which children were got into productive employment, and kept there, or the the sorts of employment into which they were got, from the small union schools of which you were the teacher, as compared with the results that are obtained in the Forest-gate School?—In the small schools of which I have been the master the demand for boys was very small. Those who left me to take situations while I was at Malling were, with three exceptions, engaged in farm labour, and it was at all times difficult to keep up communication with them, from the precarious nature of their employment, such as cow-keeping in summer time, frightening birds from the growing crops in spring season, and, as a consequent result, would wander about in search of other employment so soon as those were over. I strongly object to this kind of labour for this class of boys. I always found that it never raised a boy; on the contrary, it made him loose in his habits, gave him every opportunity of mixing with bad companions, and training and education was lost upon him. The demand for boys to fill respectable situations was very scanty. During the whole time I was at Malling, one left as clerk in an office at Woolwich, doing well; one left as an apprentice to a grocer, doing well; and another, I think, to live in a gentleman's family; but with these three exceptions, during the four years and a-half at Malling, all the others were engaged for agricultural labour. The average number in each year that left the school for employment was about five, sometimes less. In the case of the three boys before alluded to, they obtained those situations through my own personal influence with friends. They are doing exceedingly well. The others I know nothing of. After a great deal of persuasion, I prevailed upon the guardians of the Malling Union to let me have a drum and flute band, with the view of training boys for the army and navy bands, and had I remained, I think I should have rendered it a success; as it was, I bespoke six vacancies in the 33rd Regiment, and one boy filled a vacancy, a week or two after I left, in a regiment at Portsmouth; but, of course, a band cannot be made successful, to any great extent, only in large schools, as it requires much care in the selection of suitable boys, it being an essential point that a boy should be able to distinguish time and tune. In the Fulham Workhouse School, where there were a few more boys than at Malling, and being nearer London, the demand for boys was a little more brisk, as apprentices for tailoring and shoemaking, hair-dressing, and baking; but the school being small, I had but few suitable boys to select from, consequently the average result in a year presented a poor return; and in each case had the schools been large, I could have had a good school band, and transferred them into army bands; but the smallness of the schools in both cases, I feel persuaded, was the great hindrance to their success. In this school we have, on the whole, a well-sustained demand for boys as apprentices to the various kinds of trades, such as tailoring, shoemaking, &c., the guardians first of all ascertaining whether the situation is suitable for the boy, and he is from time to time visited by the chaplain for a period of two years after he has left the school; and we are enabled, in most cases, to follow up a boy for several years, and thus a wholesome influence is brought to bear upon the boy, and very few indeed are the cases where a boy fails to do well. The chief success of a large school like this, as regards the boys, is to be attributed to the band maintaining in regular training not less than 40 boys. There at once we have, in one branch of real productive industry, a small school averaging 40 boys; and with regard to the boys so trained, when once they had left the school and obtained situations as band boys in the army, they are well and permanently provided for, and having a good general knowledge of military music, combined with drill, are always sought for in preference to those not so taught and drilled. For instance, we sent six boys at one time, last year, into the 39th Regiment of Foot. There at once we cover the average return of those who obtain situations in a small school during a whole year; and many of these boys rise to good positions. One boy that I had in my school here, four years ago, is now the best euphonium player in her Majesty's Life Guards' Band, and others that I could mention have been very successful. Next to the band, our greatest demand is for shoemakers. Perhaps the subject of "supply and demand" is even better substantiated in the case of the girls. I might observe, in the first place, that there are but few applications for domestic service in a small school, and I have observed that they seldom remain long in one situation. This may, perhaps, in some measure, be owing to the fact that they are not watched after for the first year or two, and even when they obtain the situation, being so small a number to select from, a child is often sent ill-suited to fulfil the duties expected of it, and more than this, she has not had the advantage of being properly trained and taught for domestic service in a small school, for the very reason that the means are not deemed of sufficient importance, and are, therefore, not provided, for instance—cooking, house-cleaning, washing, &c. In a school of this kind, where everything must be done properly, and in a fixed space of time, a child acquires habits of quickness, care, and tact, so essential to their success. The demand here for servant girls is very considerable; oft-times we send one girl per week, for months in succession, and they are regularly visited by the chaplain in the same manner as the boys; and we have but few cases where a girl fails to become a good servant, and to advance her own interest in life. One girl, for instance, I could quote, whom the matron herself trained as a cook and general servant, has now a good situation as head-cook in a gentleman's family. I thought I would mention this fact, though it does not bear any particular connection with the question before me. With regard to the teaching in a small school, it is a well-substantiated fact that the teacher, for several months of the year, does not what is called teach in the proper sense of the term at all, but trusts rather to expediency. In this I have the ready assent of many schoolmasters; nor is the case so much a matter of surprise when we take into consideration the few scholars, and those with ages and intellects so widely differing; and it is a practice with many teachers to neglect, in these schools, teaching the boys at all until within a short time of the inspector's annual visit, when the cramming of a few of the principal facts into the boy is the only object sought, and more than this, many schoolmasters carry on a system of petty bribery, to induce them to "learn up" ready for the inspector's visit. Now, in a large school it would be almost impossible for this to be done, from the fact that the school is often visited by strangers. There is, as a rule, more than one teacher, and the inspector's examination is far more testing; and, too, the apparatus and general appliances of a small school are, as a rule, very defective, and, in many instances, wholly wanting. The same books are used in secular reading year after year, for instance, and thus a boy acquires a habit of reading from memory and rote, instead of gaining, by progressive standards, a well-grounded knowledge of words, from which good reading can only be attained. And, in a small school, too, the teacher gets very much dissatisfied with his position, and, on the first opportunity that presents itself, he seeks another field of labour, where he fancies at least he shall obtain better remuneration, and have scope to illustrate and develop the attainments which years of patient study seemed to demand.

SCHOOL-TIME OBTAINABLE FOR TECHNICAL EDUCATION IN SCOTLAND.

J. Morrison, Esq., Rector of the Free Church Training School, Glasgow.

1. What, under the best school-training in its present condition in Scotland, is the amount of attainment you may impart in the infant half-school stage, by three hours' labour per diem?—The infant-school stage may be taken as extending from four to six years of age; in addition to numerous lessons on objects, training mainly the faculty of observation. It is, in my opinion, quite possible, in the infant-school stage, to teach children to read a plain, simple, story with considerable fluency; to write on slate or paper the various letters, and to transcribe from their reading books to slate with fair rapidity. Ciphering, also, in its simpler ideas, might be taught.

2. What is the amount of intellectual attainments that one can impart by the best school teaching up to the age of 10½, when children of the wage-classes are required to be bread-winning?—Assuming that children make the attainments specified in answer 1, between the ages of four and six, there should be no difficulty in giving, in the next four years and a-half (provided the schooling is continuous), a sound elementary education in the ordinary branches, *i.e.* the power of reading English with ease and intelligence; the power of writing clearly and legibly; and of performing intelligently all the arithmetical operations required in the ordinary business of life. On the conditions supposed, much general information would have been communicated. As much attainment could easily be made by the age of 10½ as, under present general arrangements, is made by the age of 12½, *i.e.*, under a proper infant-school system, carried on to a properly equipped juvenile system, we might save two years before 12½ years, and have the work at least as efficiently done. I do not advocate this saving but on the assumption that children *must* be bread-winning when 10½ years of age. I can see no difficulty in the world, under proper administrative aggregation, and with a proper system of infant and juvenile school teaching, of giving them, before that age, a good elementary education—a better education

than the majority attain at present at the age of 12½ years.

3. What amount of attainment may be imparted after that to the boy or the girl of the shop-keeping or middle-class, up to the time when his assistance may be required in business ?—The age for business may be taken as 14½ on an average. This allows four additional years of schooling to this class. Assuming that they have gone through the English and juvenile school system of queries 1 and 2, and have made at 10½ the attainments specified in last question, it is clear that the four additional years can enable us to accomplish much. In that time a thorough English education, including an acquaintance, more or less, with our literature, and a knowledge of grammar and analysis could be given. Arithmetic, history, and geography, and particularly some acquaintance with the elementary principles of science-instruction, *i.e.*, in some branch of technical education, could all be taught. By 14½, in one word, well-educated youths should be the rule, and not the exception, in all our schools. On the conditions specified, every child aged 14½ should be well educated.

	Age.	
(*a.*)	4 – 6	Able to read simple stories, spell simple words, write easy words, and know the figures and simple exercises.
(*b.*)	6 –10½....	Read well and fluently, write with ease and legibility, and do all the arithmetical operations required in common life.
(*c.*)	10½–14½....	In addition to *b* :—History, our own and general. Geography, our own and general. Grammar and analysis. Composition—write a plain letter. Drawing. Music; and more or less of science, say physiology, or the laws of health, &c.

4. What, in your experience of schools in Glasgow, would be the gain in time and teaching power of a common education for boys and girls ?—The gain in time would be considerable; the gain in teaching power still more so. My experience leads me to the opinion that the influence of the sexes on each other in school tends to stimulate both. Voluntary attention is thus kept alive, and greater results will, in the nature of the case, follow. I cannot condescend upon any numerical expression of the gain in time. The gain in teaching power can be more easily approximated. If the boys and girls of the whole country are to be taught separately, it is evident that the teaching power must be increased to an enormous extent. Thus, merely by way of illustration, suppose each unit of the teaching staff capable of teaching 100 pupils, and that in any given school area we have 100 scholars of school age, one half being girls and the other boys, it is clear that one person could do the work, on the principle of common or mixed education being the rule, whereas, on the opposite principle, two would be required. The saving of teaching power would in this case be one-half. This figure is too high for the country taken in the aggregate, but in a large proportion of our rural districts, where the number of children of school age within any reasonable school area does not exceed 100, the figure may be taken as approximately correct. In town districts, and in thickly peopled manufacturing districts, the gain would not, of course, be so high. Still, looking at the relative proportions of the population in town and rural districts, I should be inclined to say that, on the principle of common education, there might be a gain of about two-fifths in teaching power in the kingdom as a whole, compared with what would be requisite were a separate education the rule.

5. Will you state any disadvantages of a common education under proper superintendence ? I can conceive no special disadvantages. My experience on this point has been this—For 16 years I have been at the head of a school where, on an average, 1,100 meet daily, nearly equally divided into males and females, whose ages range from 4 to 24. During all that time nothing has occurred to lead me to alter the opinion which I strongly hold, that good, intellectually and morally, results from a common education. I assume that the superintendence is vigilant and constant, and that the moral tone of the school is high. Without these conditions, I would modify my opinion on the advantages of a common education after the age of 12 or 13.

GAIN OF TIME AVAILABLE FOR TECHNICAL INSTRUCTION IN ENGLAND.

W. T. Imeson, Esq., B.A., Head Master of the Central District Half-time School of London (with 500 boys).

What is the amount of attainment imparted in the infantile stage of from four to six years of age ?—I do not impart instruction in the infant-school. Giving it as my opinion, I would state that reading and writing may both be acquired there, so as to be effective instruments of development, by children of six or seven years of age. Children, even in infant-schools, must be allowed a sphere for their own efforts. To observe with effect should be their great object. They are never too young for this. Under skilful management, a year or two passed in an infant-school may save years of instruction. Otherwise, except as preventing bad impressions, the time is lost.

What is the amount of attainment you impart from six to 10½ years of age ?—The continuation of a course of judicious teaching and wise inspection will bring children of 10 years of age to the standard of development usually attained at the age of 12 or 13. The teaching must be thorough—not " fast" in the usual sense; and there must be no " cram," in the apprehension of the inspector's visit, nor forcing appliances to make the " system" pay. The time of the children's application must not be regulated by the teacher's power of endurance, nor must the value of teaching be estimated by the time over which a routine may be spread. Industrial pursuits, valuable in themselves, must not present industrial impediments to education. The half-time system is sufficient for all the purposes of ordinary education, and *cæteris paribus*—it is superior to the whole-time system.

What is the amount of attainment imparted from 10½ to 14½ years of age ?—An extension of the scholar's time from 10½ to 14½ would admit of a very extended course on the half-time system. Habits of self-development should be fostered, so as to supplement the teaching of the master. It would render doubly effective what is too frequently lost to the pupil on leaving school. The amount of attainment secured would depend on the existing conditions of success. Reading, with understanding of the subject; arithmetic, including vulgar and decimal fractions; writing, geography, and history, with many important exercises, may be included in the half-time system. The fact that boys, from 10 to 14 years of age, are to be found pretty equally distributed in every class of a district school, does not interfere with the conclusions which suggest the above remarks, although they cannot by statistics be made available for popular conception.

PROGRESS AND STATE OF ELEMENTARY EDUCATION, IN ITS RELATION WITH SECONDARY EDUCATION, IN HOLLAND.

Dr. Lindo, Government Inspector of Primary Instruction in South-Holland.

In 1835, an English Poor-law Assistant-Commissioner, Mr. Tufnell, brought over to Holland with him another, Dr. Kay, and examined the state of primary education. They were deeply impressed with the advantages of the system of training colleges and of trained teachers, and they succeeded in implanting that system in England, Mr. Tufnell devoting three years of his salary to aid the foundation of the first training-college there. Since that period, what improvements in national elementary education do you consider to have been made here?—The whole system of education was re-organised in 1857. No subsidies are now granted to denominational schools. The leading principle of the law now is, that all schools subsidised from the public funds shall be open to pupils of every religious sect. Article 23 of the present law requires the master to inculcate "all social and Christian virtues, and carefully to avoid all dogmatical religious instruction." At the same time, it is provided that, between the school hours, the school-room may be made use of for the religious instruction of the pupils by the ministers of the several religious denominations. The law further provides that, in every commune, sufficient primary instruction shall be given for the wants of the population, in the primary schools; the number of the schools to be regulated by the provincial states (which are equivalent to English counties), acting on the advice of the government inspectors; and all salaries are regulated in the same manner. No schoolmaster or mistress, or usher, can now be dismissed, except with concurrence of the district sub-inspector. Head-masters are appointed after a competitive examination by the district inspectors. The district inspector, after a competitive examination, selects from three to six candidates, out of whom the town-council appoints one. The ushers are appointed in the following manner:—The head-master, the burgomaster, and aldermen submit the names of three candidates for the approval of the district inspector, and the town-council elects one of them. The principle of the measure is, that the head-master has the greatest interest in appointing a good usher; but he is controlled by the district inspector, who prevents mere favoritism on the part of the head-master. The town-council retains the right of appointing its own officer. The sub-officers are dismissable in the same manner as the head-master. All public schoolmasters have retiring pensions on the following grounds:—That he has a right to two-thirds of his full pay after forty years' service, and attaining the age of sixty. If pensioned before this time, he has one-sixtieth of his salary for every year's service, with the proviso that the pension shall never exceed two-thirds of the salary. The standard of the qualification of the school-teachers is much higher than before 1857. No monitors are allowed to give instruction beyond the age of 18. They must then pass the government examination as ushers, or they must leave the school. They must be 23 years of age before presenting themselves for examination as head-masters. The examiners are the government inspector and four district government inspectors, assisted by such persons as they please to appoint. Formerly, the system was very defective in the securities for the efficiency of the teaching, the requisite qualifications, and the positions of the teachers. The law provided, too, for the now existing government training colleges.

What changes have been made in the organisation of the schools?—A great many; the law now provides that no more than 75 children shall be entrusted to the care of one master. In a school of from 75 to 100 there must be a pupil-teacher, and, for every fifty more, an usher. This is the law. Experience has, however, proved that no master can efficiently teach more than 25 pupils at once in elementary instruction. It is a fact, too, that, with our trained teachers, very few are first-rate practical masters in all the different branches. One will excel in teaching arithmetic, but be defective in reading and writing. The best lessons are always given in the master's favourite branch of instruction. The effect of this is visible in almost all our smaller schools. Hence, obviously results the great advantage of the division of the labour of instruction in our larger schools, where there is a better opportunity of allowing each master to teach his favourite branch.

Is it to be understood that the denominational schools, being necessarily for the greater part small schools, were of defective school organisation as compared with the neutral schools, in which the children of the different sects were brought together, and that an improvement in the amount and quality of the instruction has been the result of the change?—Most decidedly. The denominational schools, of which there are nearly as many as the public schools, are defective, too, in the following respects:—The law does not insist on any fixed number of masters for a certain number of pupils. There is, therefore, a very general want of teaching-power in such schools. There is also the defect that, whilst the law renders instruction in all branches of primary instruction obligatory in the public schools, the private schools, some of which are not denominational, are left entirely free in this respect. A great deal of the school-time, in many of these denominational schools, is wasted in efforts to teach religious dogmas utterly beyond children's capacities.

From your observation of the outcome of the neutral schools, can you aver that truly religious qualities of truthfulness in thought and action are maintained in them, and that a God-fearing population will be produced by them?—Most certainly.

How as to the school hours, under the present system, in Holland?—They are generally from nine to twelve, and from two to four; Wednesday and Saturday being half-holidays. This includes, however, instruction in music everywhere, and, in some cases, drawing and gymnastics, which sometimes are called relief lessons. But I am of opinion that, at schools where the teaching power is adequate to the number of pupils, a reduction of the school-hours would be most advantageous. The strain on the capacity of attention of a child between six and twelve ought not to be extended above one half-hour consecutively. Between every lesson there should be at least five minutes' rest. A lesson in grammar ought to be succeeded by a lesson in arithmetic or some other branch. Varying the subject eases the strain, and in many respects is equivalent to repose.

How many of these half-hour lessons do you find here can be given in a day?—Productively, six may be very well given.

That is to say with skill?—Yes, that is with intervening play-time and relief lessons, which may bring the school-time to between four and five hours a day.

It is to be collected that the tendency of your observation is to shorten school time?—Decidedly. In regard to the sanitary condition of the children, shorter time for sitting together on the school benches is desirable. In Holland, there is no compulsory schooling. It is a great mistake to assume that there is; and shorter school-hours would ensure more voluntary attendance. In summer-time, it would conciliate the school attendance with the demands for various out-door occupations; but, in winter-time, with us, the poorest classes of parents are well satisfied with long hours of school attendance for this reason alone—that their children are kept in warm rooms, the climate being very severe, and fuel dear.

By what years of age in your last organised neutral schools do you teach your children to read intelligently, to spell correctly, to write a plain hand, and get them through arithmetic, to decimal fractions inclusive?—Between eleven and twelve; including vulgar and decimal fractions, and the decimal system of weights and measures.

By what time, however, do parents of the lower classes take away their children?—They scarcely ever keep them beyond their twelfth year. In agricultural and in many manufacturing districts they take them away sometimes by the ninth, sometimes by the tenth year. A great deal very often depends on the influence of the local authorities on the mass of the population. A good schoolmaster or a good burgomaster will sometimes induce parents to leave their children half a year or so more at school. Small rewards for regular school attendance I have found to be very efficacious.

Do you consider that you might, by school organisation, reduce the school-time in years?—Yes; I think this might be done, firstly by circumscribing as much as possible the instruction in history; and, in the second place, by abreviating other points of theoretical, and by no means practical, instruction.

Have you introduced physical training in your schools?—In the primary schools physical training is not compulsory by law, which is a serious defect; but it is generally encouraged, and is now becoming general. The schoolmaster who is duly qualified in gymnastic instruction, comprising the drill and the manual exercise, will obtain a higher rate of salary than another man. By the law of 1863, on secondary instruction, gymnastics and military exercises are now compulsory in all the public secondary schools. The beneficial effects are already visible in the improved physical condition of the pupils, and public opinion is entirely with the change.

Does not the improved teaching in the improved neutral schools furnish an improved basis on which to superinduce improved technical instruction?—Of course it does. The new law of 1863, for secondary (including technical) instruction is based on the improvement introduced into primary instruction by the law of 1857.

What amount of technical instruction are you now enabled to impart, up to the thirteenth or the fourteenth year?—The first technical instruction is given in the secondary schools of the lower class, called burgher day and evening schools. Algebra, geometry, common and linear drawing, and, at many schools, the elements of physics and mechanics.

What is the length of the course of study at these schools?—Generally two years. In the primary schools, however, there is some preparation for technical education, varying with the capacity and zeal of the teachers, who may do much in that way. In rural districts they introduce natural history; in manufacturing districts, physics to some extent. The whole turns upon developed special capacities and skill of teachers. We have frequently men who pass scholastic examinations very well, and utterly fail in practical skill and aptitude.

What is the present relative position of the new school teachers in Holland?—In large towns the masters are generally well paid—from £110 to £180 a-year, besides a house rent-free. The salaries vary very much in different parts of the kingdom; in some small villages they have no more than from £35 to £45, with a house and garden. If married, and with a family, their position is very sad. Every effort is being made throughout the country to raise the salaries, and much progress has been made in that respect in the last four or five years. Curates here are relatively just as badly off as the schoolmasters. Ushers very often change their profession if they can find an opportunity; the head-master very seldom.

May it be stated, then, that the progress of experience in Holland proves it to be necessary, for the advancement of national education, that it should be protected from the irresponsible rule of half-knowledge, or of positive ignorance or apathy—*i.e.*, the uncontrolled rule of the burgher (or the vestry, or the guardian class in England); that divided attention in supervision leads to inferior results; that progress can only be attained by undivided, competent, and responsible attention; that "as is the schoolmaster so is the school," and that every effort must be made to ensure the competency of the teachers, and to secure and advance their position; and that, to these ends, aggregations of pupils, for division of educational labour wherever practicable, is necessary; and that physical and mental training must go together?—Nothing can well be more prejudicial to national or any other education than the interference of unqualified persons, who worry the master, and cripple all his efforts. His superiors ought to devote themselves to their task quite as much as the schoolmaster himself. Another requisite is an influential social position. Parents, townsfolk, and authorities here in Holland, will (very often) not listen to the schoolmaster, but allow themselves to be advised and guided by the district or provincial inspector. "As is the schoolmaster so is the school" is so perfectly true, that the very first desideratum of a good educational law, in my opinion, is, that it should provide for the proper training of the teachers, and ensure them a comfortable livelihood. Aggregations of pupils for division of educational labour are requisite wherever practicable. Mental training, unless it go hand in hand with physical training, will only rear a race of wooden-legged, left-handed cripples.

What would be the effect in Holland of denominational inspection by three or four sets of denominational inspectors?—Denominational inspectors would be impossible in Holland. No dogmatic instruction is allowed to be given at the public schools, and the government inspectors take care that nothing is taught which could hurt anybody's religious feelings. (I refer to Art. 23 of the law, already mentioned.) Denominational inspectors would have nothing at all to do at the public schools; and at the denominational schools, the clergy of the sects they belong to give the tone they please to the religious instruction of the pupils.

What is found to be the intellectual and moral condition of children reared in the small denominational primary schools, when they are presented for admission into secondary or superior schools?—Very inferior indeed with regard to intellectual development, and morally they are certainly not a whit better than the others. The intellectual development is retarded—1st, by there being a great want of division of educational labour at the smaller schools; 2nd, by a great waste of time on dogmatical religious instruction greatly above the capacities of a child's brain.

Our difficulties in getting children into school in England will, it is expected, be met, as to artisans' children, by the application of the half-time principle; but compulsion will be needed in the case of the children of vagrants, or of abandoned orphans. It is expected to be necessary to force large numbers into institutions of the character of the district schools, where the failures now do not exceed three per cent. Is delinquency widely prevalent in Holland; and to the extent to which it is prevalent, how do you deal with the children of delinquents, or mendicants, or of the absolutely destitute—and with what results?—I should say not, to any great or abnormal extent. There are orphan asylums in all the towns, where great numbers of the destitute, who have lost their parents, are boarded and well educated. The children of mendicants and delinquents without means of subsistence, are sent to the two mendicant institutions (government establishments) at Ommerschans and Veenhuizen, where adult mendicants and vagrants are also provided for at the expense of the commune to which they belong (*i.e.*, of their birth-places). Both establishments are in course of improvement. The results obtained are by no means satisfactory.

Under the present voluntary system in Holland, what residuum is there of untaught children?

The last returns, published January 1st, 1868, give a residuum, for the province under my inspection, with a population of about 620,000 souls, of no less than 23 per cent. of boys between 6 and 8, and 29 per cent. of girls of the same age; of boys between 9 and 12 years of age, 18 per cent., and of girls, 24 per cent., who do not attend the day-schools. A small deduction from these figures must be made for those who are instructed at home, by private masters or governesses, perhaps 3 or 4 per cent.; but it is impossible to be quite accurate in this latter respect. About the same figures as the above form the average throughout the whole kingdom.

It must be taken into consideration that a very great number of the children who do not go to the primary school, between 9 and 12 years of age, have been to school before, and that a large number of the children between 6 and 8 have most likely been sent, between 3 and 7 years of age, to the infant schools. The education of all these is, of course, all but worthless.

The residuum is thus still terribly large, and a League has just been formed for promoting school attendance. The second meeting is to be held on the 27th inst.

The principal sources of the non-attendance at our schools are:—

(*a*). The ignorance of the parents, who are themselves incapable of appreciating the practical value of instruction. I have invariably found that parents who have had any instruction themselves, wish a higher rate of education for their children, and are generally willing to make sacrifices in order to obtain it.

(*b*). There is a great deal of poverty in the rural and manufacturing districts, besides a dearth of hands in agricultural pursuits. Child-labour is cheap, too, for manufacturing purposes, and there are but very few masters of large works who have established schools for the children's benefit. A law on child-labour in manufactories is a great desideratum here.

In rural districts one very great difficulty exists. In all seasons of the year, except the winter months, the children can earn a trifle, which their parents are too needy to give up. Some of the children referred to above as not visiting the day school, do attend the evening school, but in many cases very irregularly. A large number of villages are built along the dykes and canal banks. A population of perhaps 1,000 souls is spread over a straggling line of habitations three or four miles long. For some of the children the distance is too great on dark or wet evenings. Mud, snow, and wind, throw obstacles in the way of regular school attendance that are very difficult to overcome.

(*c*). Another cause of non-school attendance is sectarian intolerance. The Roman Catholic opposition to the public schools is no less violent here than in England. The priests very often exercise every opportunity of keeping the children from the public school; their influence on the lower classes is paramount. I know of cases in which, even where there was no Catholic school to which to send the children, many were entirely deprived of all schooling.

(*d*) Compulsory schooling in Holland is the only radical remedy I know of. There is no doubt of the efficacy of the compulsory system, and for some years it has worked with the best results in Prussia.

Is behaviour a topic of instruction in your infant schools in Holland?—Good behaviour and decent manners are inculcated in the infant schools.

To what extent has the principle of open competitive examinations, as a test for first appointments to the civil service, been applied in Holland; and what appears to be the probable effect of that principle on national education?—Competitive examinations have been introduced for most branches of the civil service, and with the best results. They are very generally approved, and will doubtless have excellent results on national education. The frequentation of the public schools is greatly encouraged by them; all mere favoritism is done away with; they encourage mental exertion and activity to a great extent. No man of sense can object to them. Competitive examinations precede appointments to military and naval cadetships, the diplomatic service, as government engineers (the civil service—the French *Ponts-et-Chaussées*), clerkships in the telegraph service, India civil service, Post-office, government accountants, &c., &c. The tendency is to introduce them into every branch of the service possible. The opposition made to them by the patrons of the denominational schools—and, of course, among these, in the very foremost ranks, by the Roman Catholics—is one of the best proofs to be given of the inferiority of their schools to the public establishments. The cry raised by them and the pietist Protestant sects is, substantially, "That the competitive examinations oblige parents to send their children to the public schools, and thus to act in opposition to their own religious convictions." This is called unfair on the part of the government, &c., &c. The only answer to be given is—"We want efficient public servants; competitive examinations enable us to get them. If you do not like our public schools, why not complete and perfect the course of instruction at your denominational establishments?" The examinations are perfectly fair and impartial, and no candidate is even asked to what creed he belongs.

EXTENT OF SCIENCE AND ART INSTRUCTION IMPARTED IN SECONDARY, HALF-TIME SCHOOLS IN HOLLAND.

Dr. Bosscha, Inspector of Secondary Education in Holland.

How much technical instruction can you impart in your best schools to pupils between 10½ and 14, who have passed through the best elementary schools? (The same information is desired with regard to pupils between 12 and 14.)

The average age of pupils admitted to the burgher schools (artisans and tradespeople) is 12. The course of study is biennial, and is, on an average, completed on the pupil's attaining his 15th year. Thus my own experience only enables me to give a pertinent answer to the second part of the question, regarding pupils between 12 and 14. The programme of the instruction in these burgher schools is based on the supposition that pupils of 12 years of age can read and write well, and know the four rules of arithmetic, with decimals and common fractions. Instruction comprises:—

(*a*.) *Elements of planimitry and stereometry*, including the theorems respecting the volume of prisms, pyramids, the cone, cylinder, and sphere. Algebraic notation—sufficient for the comprehension of a simple formula.

(*b*.) *Mechanics.*—Simple machinery, theoretically explained, exclusive of calculation of friction, and illustrated by the principle of the conservation of energy. Laws of falling bodies. Relations between force, mass, and acceleration. Influence of friction on motion. Concussion of elastic and non-elastic bodies. Equilibrium of fluids. The law of Archimedes, and its application to specific gravity. Elementary notions of the gravity of air, the barometer, the law of Boyle, and air and water pumps.

(*c*.) *Physics.*—Elementary notions of dilatation by heat; thermometers; boiling and melting; electricity, lightning-conductors, electro-magnetism, telegraphs, mirrors, and optical glasses. It is considered essential to illustrate this instruction by experiments.

(d) Chemistry.—Composition of atmospheric air; combustion, water, distillation, chemistry in gasworks, ivory-black manufacturing. The principal chemical elements applied to industrial purposes, as, carbon, preparation of charcoal; sulphur, fabrication of sulphuric acid; chlorine, and bleaching substances; iodine, in its application to photography. Metals:—iron, copper, tin, lead, zinc, silver, and gold. The ores; metallurgy, the principal metallic salts, and the way of preparing them. Organic chemistry. Fibrous substances. Amylum,—sugar, alcohol, greases, some organic acids and basis; aniline colours.

(e) Natural History.—Anatomy of the human body (elementary). Characteristics of classes in the animal kingdom. More at length description of domestic animals.

(f) Common and Linear Drawing with pupils between twelve and fourteen is, of course, only elementary. At this age they have neither sufficient steadiness nor skill to accomplish a really good drawing. Most of the pupils,

after passing through the course of instruction at school, continue their frequentation of the drawing lessons for several years.

The lessons are given at these schools in the evening between six and nine, thus at most eighteen hours a-week. It is, however, to be remarked, that though the age fixed, as above stated, is between twelve and fourteen, most of the pupils are really older. This is the result of deficient preparatory instruction. They leave the elementary (primary) schools, in general, before their eleventh year, remain two or three years without any instruction at all, and then come to the burgher schools. They have, in many cases, forgotten most of what they had learnt at the elementary schools, and, in consequence of mental inactivity for so long a period, there is naturally a diminution of intellectual capacity. To remedy this, they are sent to a preparatory class, where they sometimes remain one or two years. There is, no doubt, however, that boys of twelve, properly prepared by elementary instructions, can master the above-mentioned subjects in two years' time. I can affirm this from my own experience. My opinion is, that technical instruction between ten and twelve years of age can be of little avail. This period is more adapted for the consolidation and extension of purely elementary or primary instruction, critical reading, theory of arithmetic, correct speaking, sound notions of history and geography.

Of what positions in life, chiefly, are the pupils who attend these evening schools; and in what sort of productive service are they engaged during the day ?—This will be shown by the following summary of the pupils, trades and professions. On an average there are, of every 100 pupils, 47 apprentice-carpenters, joiners, cabinet makers, and coach builders; 17 smiths, instrument makers, and tinmen; 7 stone-cutters, masons, and plumbers; 5 statuaries, plasterers, silversmiths, engravers, and lithographers; 9 painters, glaziers, and workers of lacquered wares; 9 various trades; 6 pupil teachers, schoolmasters, merchants' and other clerks.

For what sort of service is the recited course of study found to qualify the pupils ?—The plan of study is to impart general information, serviceable in all trades and professions. There is no preparing for any special trade or profession, but it forms clever and skilful men for whatever trade they follow. The object in view is to render the pupils capable of acquiring practical knowledge with judgment and intelligence.

Is the attendance increasing at these evening schools, or, as we should call them in England, half-time schools, &c. ?—The attendance has been steadily on the increase —about thirty per cent., from 1868 to 1869.

What advanced result, in time, of imparting a given amount of knowledge to these classes of children, do you conceive might be obtained if the studies could be made to follow immediately upon the instruction of the primary schools ?—In this case, according to my opinion, instruction at the primary school ought to be carried on till the twelfth year, as results from what has been stated above regarding schooling between ten and twelve. If this were carried into effect, pupils might be expected, in general, to have passed through the course of study above cited with their fourteenth year, which now happens but rarely.

THE FAVERSHAM SCHOOL UNION.

This is an example of the gain of teaching-power by union, which has been repeatedly visited and examined by members of the Council. Faversham has a population of from five to six thousand. The lower and middle-class children were at one time taught in the single-chambered schools of nine parishes, at from thirty to forty shillings per head for six or seven years of comparatively inferior teaching, to impart the three R's., which was only superficially applied as respects the wage-classes, who often required to have their children away before the teaching could be completed. By union (the formation of which is an instructive history), the whole of the children (about 900) were brought under one institution, comprising an infant-school; a primary school, or classes; a secondary school, or technical education classes; with the results—1st, of a reduction of the time of elementary teaching to one-half, or before the eleventh year, and the teaching of a superior order, including some instruction in elementary drawing and in music; and, 2nd, a gain of between two and three years of time for the technical instruction of the children of the middle classes, or for those who could afford to let their children remain longer. The commercial school, as it is called, gives "instruction in the Holy Scriptures, in general English literature, geography, navigation, land surveying, book-keeping, agricultural science, French, and such other branches of useful knowledge as to the trustees shall from time to time seem fit, so as to afford an opportunity of acquiring a sound religious, moral, and useful education." The cost of the teaching power, by which this was achieved by means of a subdivision of educational labour, is almost one pound per head per annum. The religious difficulty was overcome by providing that, if the parent of any child would send in a written request that the child should not be taught the church catechism, it should not be taught; but no such request was sent in. The governing body of the school union comprises the clergy of the several parishes, the ministers of the dissenting congregations (who are nearly one-third of the religious community), the mayor for the time being, and the trustees of a local charity the proceeds of which are applied for school buildings, &c. Provision is made for the promotion of advanced children of the wage-classes from the primary to the secondary school, and arrangements are in progress to combine the proceeds of the educational endowment for a grammar or superior classical school with the primary or the secondary school, so as to provide a superior education for the children of those professional persons, resident in the town, who can afford to let them remain beyond their thirteenth or their fourteenth year, and thus crown the local educational organisation.

The school union is open to the admission of children from the adjacent district, and gains by it. Some children come to it from a distance of between four and five miles. Farmers' sons, and agricultural labourers' sons, as well as shop-keepers' sons, come to it. The experience of the institution shows that an administrative area for education may be six miles in diameter, and families, including children for the infant school, go and return from distances of three miles daily. The elder children bring the younger to the infant school or lower classes, and themselves go to the higher classes, and, on their return, take home the younger children. The organisation admits of extension, and further reductions in time, and of needful improvement, by the addition of provision for physical training; but, as it is, the members of the Council who have visited and examined the school consider it to be a highly important typical example for study and wide imitation, providing educational advantages, not otherwise attainable at any moderate cost, for the adjacent rural population. The following gives the numbers and the social position of the pupils taught in the classes, and also of the cost of the teaching power per head when it was last visited :—

PRIMARY SCHOOL.

Sons or daughters of Agricultural labourers......	244
„ „ Artisans..................	412
„ „ Dredgers, sailors, &c.	122
„ „ Operators in cement or gunpowder works	134
„ „ Brickmakers	113
Total......	1,025

SECONDARY OR TECHNICAL SCHOOL.

Sons of	Professional persons	21
,,	Ship-owners	4
,,	Farmers	12
,,	Tradesmen	52
,,	Artisans	12
,,	Clerks	7
	Total	108

The cost per head was as follows:—

No. of Scholars.	Time of teaching.	School expenses.	£	s.	d.	Total cost per head.
1,025	About five years.	Masters & mistresses	351	5	0	About £5 3s., including the infant school.
		Assistants	250	7	11	
		Pupil teachers	220	0	0	
		Monitors	69	4	6	
		Expenses	172	10	0	
		Anuual cost per head	1	0	9	

The total cost of the separate teaching in the smaller schools would be more than double.

ADMINISTRATION OF EDUCATIONAL FUNDS.

Illustrative Tables by W. T. IMESON, B.A., Head Master of the City of London Central District School.

TABLE A.—SHEWING THE DISTRIBUTION OF FUNDS IN EDUCATION, AND THE DIMINUTION IN COST PER HEAD, FOR THE ELEMENTARY EDUCATION OF EACH CHILD, BY THE SUPERIOR ORGANIZATION OF LARGE SCHOOLS AS COMPARED WITH SMALL, AND THE CONSEQUENT LESSENING OF THE TIME OF TEACHING BY YEARS.

No. of boys in each school.	Graduated Payment of Masters in Large Schools.								Yearly salaries paid to Masters.	Yearly current expenses.	Yearly cost per head.			Time in Years.	Total cost per head for an elementary education.		
	1st.	2nd.	3rd.	4th.	5th.	6th.	7th.	8th.	£		£	s.	d.		£	s.	d.
50	80	..	..	..	..	..	..	..	80	30	2	4	0	7	16	8	0
100	100	60	..	..	..	..	..	..	160	35	1	19	0	7	13	13	0
150	115	75	50	..	..	..	..	..	240	40	1	17	0	6	11	4	0
200	130	80	60	50	..	..	..	..	320	45	1	16	6	5	9	2	6
250	140	85	65	60	50	..	..	..	400	50	1	16	0	4	7	4	0
300	150	90	70	65	60	50	..	..	480	55	1	15	8	3	5	7	0
350	160	95	75	70	60	50	50	..	560	60	1	15	5	3	5	6	3
400	170	100	80	75	50	50	50	50	640	65	1	15	3	3	5	5	9
1,800	..	..	..	..	..	..	..	..	£2,880	..	..			..	..		

TABLE B.—DISTRIBUTION OF FUNDS AND DIMINUTION OF COST, UNDER AN IMPROVED AND EFFECTIVE SYSTEM, IN LARGE SCHOOLS AS COMPARED WITH SMALL.

No. of boys in each school.	Graduated Payment of Masters.								Amounts paid to Teachers.	Expenses incurred.	Yearly cost per head.			Time in Years.	Total cost per head with large schools and improved system.		
	1st.	2nd.	3rd.	4th.	5th.	6th.	7th.	8th.	£		£	s.	d.		£	s.	d.
50	80	..	..	..	..	..	..	..	80	30	2	4	0	7	16	8	0
100	100	60	..	..	..	..	..	..	160	35	1	19	0	7	13	13	0
150	115	75	50	..	..	..	..	..	240	40	1	17	4	6	11	4	0
200	130	80	60	25	..	..	..	..	295	45	1	14	0	5	8	10	0
250	140	85	65	50	25	..	..	..	365	50	1	13	2	4	6	12	8
300	150	90	70	55	50	25	..	..	440	55	1	13	1	3	4	19	3
350	160	95	75	60	55	50	25	..	520	60	1	13	1	3	4	19	3
400	170	100	80	65	60	55	25	25	580	65	1	12	3	3	4	16	9
1,800	..	..	..	..	..	..	..	..	£2,680	..	..			..	..		

EXPLANATION OF THE TABLES.

Preliminary Remark.—It is necessary to have units of measurement in all comparative estimates of this kind. We assume, therefore, that 50 boys be a unit of work for one master, that £80 be a unit of pay for one master in a small school, and that £5 per annum be a unit of increase for the current annual expenses caused by every addition of a unit of work. Different units may be assumed, but they do not affect the final result.

Table A.

1. *No. of Boys in School.*—This column represents 8 schools, each increased by 50 boys. The total number is 1,800. This would give us 36 small schools, with one master to each, having altogether 1,800 boys.

2. *Graduated Payment of Masters.*—From the table, it appears that the sum total of the yearly salaries paid to the masters is £2,880. This is also the amount paid to 36 masters of small schools, each receiving £80. This comparison is made under the supposition that the whole of the masters are competent, and not pupil-teachers. The latter are introduced in Table B. The effect of this distribution of salaries, on education generally, has been elsewhere shown.

3. *The Yearly Current Expenses.*—In this column Mr. Allen's estimate has been graduated, so as to give £5, as additional expense, for every increase of 50 boys.

4. *The Yearly Cost per Head.*—This column shows the cost, after adding together salaries and current expenses, as seen in the two preceding columns. The decrease in cost is remarkable, for it comes out irrespective of time saved by organization and improved methods.

5. *Time in Years.*—The graduation of this column depends on the school results produced. It will be sufficient to state, from experience, that seven years' work in the schools may, by organization and improved methods, be reduced to three.

6. *The Total Cost of Elementary Education.*—This is the yearly cost, multiplied by the number of years at school. The improved organization and methods that would follow the formation of large schools, and the introduction of a better system of paying and rewarding the masters, would lessen the time of teaching, and, consequently, the cost per head, as seen in this column. Those taught in three years do not cost a third of those that spin out seven years in getting the same amount of knowledge imperfectly.

Table B.

This shows how Pupil-teachers may be introduced, so as to lessen the cost to a fourth, instead of a third, as in Table A. To what extent the Pupil-teacher system may be introduced, is a question that requires separate consideration.

The following is interesting, because it shows how nearly the same result may be obtained in very different ways. In one way the Pupil-teacher system is prominent, in the other that of Masters:—

	Boys.	Teachers, &c.				Time in Years.	Total Cost.		
			£	s.	d.		£	s.	d.
Mr. Allen. (Vide Table published by Society of Arts, March 4, 1869.)	40	Master and Mistress	70	0	0	7	16	10	0
		Monitor	2	10	0				
		Expenses	30	0	0				
	400	Master	180	0	0	4	4	0	0
		One assistant	70	0	0				
		Six pupil-teachers	90	0	0				
		Expenses	55	0	0				
Mr. Imeson. (Vide Table B. above.)	50	One Master	80	0	0	7	16	8	0
		Expenses	30	0	0				
	400	Head Master	170	0	0	3	4	16	9
		Five Assistant Masters	360	0	0				
		Two Pupil-teachers	50	0	0				
		Expenses	55	0	0				

In the latter case, the well-paid effective staff can do their work in three years instead of four.

Application.

There is a school in a village of Middlesex where there is accommodation for 70 boys, *i.e.*, for 40, and, by an act of grace on the part of the trustees, for 30 more. This extension appears to be quite in accordance with the wishes of the founder, still many are excluded for want of room, although three-quarters of an acre is attached to the school, and there is a field near, of about four acres, belonging to it, more eligible for building. Taking a circuit of three miles from this school as a centre, there are many hamlets to be found, increasing in population, with only one or two national schools, the rest being merely infant schools. From this village, children, excluded from school for want of school accommodation, are to be seen going two or three miles to get the means of instruction, while at the same time the funds of this village school have accumulated to the amount of ten or twelve thousand pounds. With a good site, large funds, and a proper sphere, what hinders the community from enjoying to the full extent that boon which it was the evident purpose of the founder to bestow?

ADMINISTRATION OF FUNDS FOR EDUCATION.

Table Illustrative of School Organizations for the Augmentation of Efficiency with Reduction of Expense.

[In this Table—which has been prepared on request by Mr. T. P. Allen, an experienced and skilful teacher who had charge, under Earl Russell, of an Elementary School at Petersham—it is assumed that the pupils enter school at seven years of age. At the end of the several periods mentioned in the third column, they would write a clear hand, and would read intelligently, and would be capable of passing with credit the ordinary Examinations in Arithmetic approved by the Privy Council; they would have thoroughly mastered the usual rules, including Proportion, as far as Decimal Fractions inclusive.]

No. of Scholars.	Annual Cost per Head.	£	s.	d.	Time of Teaching.	Total Cost per Head.
40	Master and Mistress*	70	0	0	6 to 7 years	About £16 10 0
	Monitor	2	10	0		
	Expenses†	10	0	0		
	House Rent‡	20	0	0		
	Annual Cost per Head	£2	11	3		
70	Master and Mistress..	75	0	0	7 years§	About £12 10 0
	One Pupil Teacher	15	0	0		
	Expenses	15	0	0		
	House Rent	20	0	0		
	Annual Cost per Head	£1	15	6		
120	Master and Mistress..	105	0	0	6 years	About £9 0 0
	Two Pupil Teachers..	30	0	0		
	Expenses	25	0	0		
	House Rent	25	0	0		
	Annual Cost per Head	£1	10	10		
200	Master	135	0	0	5 years	About £6 0 0
	Four Pupil Teachers	60	0	0		
	Expenses	35	0	0		
	Annual Cost per Head	£1	3	0		
400	Master	185	0	0	4 years	About £4 0 0
	One Assistant	70	0	0		
	Six Pupil Teachers	90	0	0		
	Expenses	55	0	0		
	Annual Cost per Head	£1	0	0		
700	Master	240	0	0	3 to 4 years	Nearly £4 0 0
	First Assistant	110	0	0		
	Second Assistant	70	0	0		
	Twelve Pupil Teachers	180	0	0		
	Expenses	100	0	0		
	Annual Cost per Head	£1	0	0		

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* It will be seen that no mistress is allowed when the number of scholars exceeds 120. In those cases separate establishments are maintained for boys and girls.

† By Expenses is meant disbursements for Stationery, Cleaning, Repairs, &c.

‡ Small Schools, especially in the case of the so-called National Schools, are usually provided with teachers' residences. In estimating cost, therefore, in the small schools, we must include a fair per-centage (£5) upon the capital employed in the construction of the residence, the teacher's income being affected to the full extent of the supposed rental.

§ A school of 70 is perhaps rather more obstructive to progress than one of 40. In the latter, though the organisation is necessarily very imperfect, the surveillance of the master can be more readily directed to every individual. In much larger collections this advantage in favour of a small number is much more than counterbalanced by the constant general supervision of the master, by the aptitude and intelligence of his subordinates, &c.